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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
| 10/568,589  | 10/24/2006  | Sung Uk Moon         | 286483US8PCT                | 7118             |
| 22850 7590 01/21/2010<br>OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>KARIKARI, KWASI |                  |
|   |             |                      | ART UNIT                    | PAPER NUMBER     |
|   |             |                      | 2617                        |                  |
|   |             |                      | NOTIFICATION DATE           | DELIVERY MODE    |
|   |             |                      | 01/21/2010                  | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/568,589 | <b>Applicant(s)</b><br>MOON ET AL. |  |
|                              | <b>Examiner</b><br>KWASI KARIKARI    | <b>Art Unit</b><br>2617            |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/16/2006, 05/01/2007 and 04/09/2009</u> .                   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Information Disclosure Statement**

1. The information disclosure statement (IDS) submitted on 04/09/2009, 05/01/2007 and 05/16/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### **Claims Objection**

2. The claimed language “wherein” in claims 1 and 2 does not limit the claims to a particular structure/system. The Examiner recommends replacing the “wherein” clause with a transitional phrases such as comprising, consisting etc. Appropriate corrections are required.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-23 are rejected under U.S.C. 102(e) as being anticipated by Aggrawal et al., (U.S 6,999,434), (hereinafter, Aggrawal).**

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**Regarding claim 1**, Aggrawal discloses a mobile communication system for transmitting same information to a mobile station via a plurality of cells (= mobile unit/station communicates with different base station in different cell, see col. 3, lines 6-42; and combining identical frames/packet, see col. 4, lines 16-45 and col. 12, lines 55-64), wherein:

the mobile station is configured to determine whether to perform soft combining or selective combining on the same information received, based on receiving method selection information for receiving the same information via the plurality of cells (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frames, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 2**, Aggrawal discloses a mobile communication system for transmitting same information to a mobile station via a plurality of cells (= mobile unit/station communicates with different base station in different cell, see col. 3, lines 6-42; and combining identical frames/packet, see col. 4, lines 16-45 and col. 12, lines 55-64), wherein:

the mobile station is configured to determine whether to perform soft combining or selective combining, or not to perform combining processing on the same information received, based on receiving method selection information for receiving the same information via the plurality of cells (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frames, see col. 8, line 60-col. 9,

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line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 3**, Aggrawal discloses a mobile station (= mobile unit/station communicates with different base station in different cell, see col. 3, lines 6-42; and combining identical frames/packet, see col. 4, lines 16-45 and col. 12, lines 55-64), comprising:

a receiving method selection information acquiring unit configured to acquire receiving method selection information for receiving same information transmitted via a plurality of cells (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frames, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57); and

a determining unit configured to determine whether to perform soft combining or selective combining on the same information received, based on the receiving method selection information (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frames, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 4**, as recited in claim 3, Aggrawal discloses the mobile station, wherein the determining unit is configured to determine whether to perform soft combining or selective combining, or not to perform combining processing on the received same information, based on the receiving method selection information

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(see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 5**, as recited in claim 3, Aggrawal discloses the mobile station, wherein: the receiving method selection information acquiring unit is configured to acquire receiving method instruction information showing soft combining or selective combining from a network or a base transceiver station; and the determining unit is configured to perform the determination based on the receiving method instruction information(= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frame, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 6**, as recited in claim 3, Aggrawal discloses the mobile station, wherein: the receiving method selection information acquiring unit is configured to receive, as the receiving method selection information, transmission timing information on the plurality of cells from the plurality of cells, respectively; the mobile station further comprise a transmission timing difference measuring unit configured to measure a transmission timing difference between the plurality of cells (= frame synchronization; time shift and first data arrive at To, see col. 12, lines 5-54), based on the received transmission timing information; and the determining unit is configured to perform the determination based on the transmission timing difference (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching

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frame, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 7**, as recited in claim 3, Aggrawal discloses the mobile station, wherein: the receiving method selection information acquiring unit is configured to receive, as the receiving method selection information, a transmission timing difference between the plurality of cells from a network or a base transceiver station; and the determining unit is configured to perform the determination based on the transmission timing difference (= frame synchronization; time shift and first data arrive at To, see col. 12, lines 5-54).

**Regarding claim 8**, as recited in claim 1, Aggrawal discloses the mobile communication system, wherein a radio network controller provides, as the receiving method selection information, control information including information as to whether broadcast service or multicast service can be provided or not in a neighboring cell of a current cell in which the mobile station is located (= simultaneously reception of identical information from serving base station and target base station, see col. 3, lines 32-51; and col. 3, line 62-col. 4, line 15; and col. 4, lines 35-45).

**Regarding claim 9**, Aggrawal discloses a radio network controller for use in a mobile communication system for transmitting same information to a mobile station via a plurality of cells (= mobile unit/station communicates with different base station in

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different cell, see col. 3, lines 6-42; and combining identical frames/packet, see col. 4, lines 16-45 and col. 12, lines 55-64), comprising:

a determining unit configured to determine whether broadcast service or multicast service can be provided or not in a neighboring cell of a current cell in which the mobile station is located (= simultaneously reception of identical information from serving base station and target base station, see col. 3, lines 32-51; and base station can inform the mobile station how determine how to combine packet from serving and target base station, see col. 12, lines 3-54); and

a notifying unit configured to provide control information including a result of the determination, as receiving method selection information for receiving the same information at the mobile station (= base station can inform/instruct the mobile station how determine how to combine packet from serving and target base station, see col. 12, lines 3-54).

**Regarding claim 10**, as recited in claim 9, Aggrawal discloses the radio network controller, wherein the notifying unit is configured to provide, as the receiving method selection information, only the control information on the neighboring cell in which broadcast service or multicast service can be provided (= base station can inform/instruct the mobile station how determine how to combine packet from serving and target base station, see col. 12, lines 3-54).



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**Regarding claim 11**, as recited in claim 9, Aggrawal discloses the radio network controller, wherein the control information includes channel information on a radio channel used in the neighboring cell (see col. 12, lines 3-64).

**Regarding claim 12**, as recited in claim 9, Aggrawal discloses the radio network controller, wherein the notifying unit is configured to transmit, as the receiving method selection information, a difference between a transmission timing in the neighboring cell in which broadcast service or multicast service can be provided and a transmission timing in the current cell (see col. 12, lines 3-64).

**Regarding claim 13**, as recited in claim 9, Aggrawal discloses that the radio network controller, further comprising a receiving method instructing unit configured to provide an instruction on whether to perform soft combining or selective combining on the same information received at the mobile station, based on the receiving method selection information(= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frame, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 14**, as recited in claim 3, Aggrawal discloses the mobile station, wherein: the receiving method selection information acquiring unit is configured to acquire, as the receiving method selection information, control information including

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information as to whether broadcast service or multicast service can be provided or not in a neighboring cell of a current cell in which the mobile station is located (= simultaneously reception of identical information from serving base station and target base station, see col. 3, lines 32-51; and base station can inform the mobile station how determine how to combine packet from serving and target base station, see col. 12, lines 3-54); and the determining unit is configured to perform the determination based on the control information (see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 15**, as recited in claim 14, Aggrawal discloses the mobile station, wherein the control information includes channel information on a radio channel used in the neighboring cell (see col. 12, lines 3-64).

**Regarding claim 16**, as recited in claim 14, Aggrawal discloses the mobile station, wherein: the receiving method selection information acquiring unit is configured to acquire, as the receiving method selection information, a difference between a transmission timing in the neighboring cell in which broadcast service or multicast service can be provided and a transmission timing in the current cell (see col. 3, lines 6-42); and the determining unit is configured to perform the determination based on the control information and the transmission timing difference (see col. 12, lines 3-64).

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**Regarding claim 17**, as recited in claim 14, Aggrawal discloses the mobile station, wherein the determining unit is configured to perform the determination for the same information received from the neighboring cell in which broadcast service or multicast service can be provided (see col. 12, lines 3-64).

**Regarding claim 18**, as recited in claim 7, Aggrawal discloses that the mobile station, further comprising: a storage unit configured to associate and store the transmission timing differences and combining methods for the same information; wherein, the determining unit is configured to perform the determination based on the combining method associated with the received transmission timing difference (= frame synchronization; time shift and first data arrive at To, see col. 12, lines 5-54).

**Regarding claim 19**, as recited in claim 7, Aggrawal discloses that the mobile station, further comprising: a storage unit configured to associate and store the transmission timing differences, processing capabilities of the mobile station, and combining methods for the same information (see col. 14, lines 43-57); wherein, the determining unit is configured to perform the determination based on the combining method associated with the received transmission timing difference and the processing capability of the mobile station (= frame synchronization; time shift and first data arrive at To, see col. 12, lines 5-54).

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**Regarding claim 20**, as recited in claim 7, Aggrawal discloses the mobile station, wherein the determining unit is configured to determine that soft combining be performed on the received same information, by using all predetermined reliability information corresponding to reception qualities of radio channels used in the plurality of cells, when the received transmission timing difference has a value within a first range (see col. 12, lines 5-64).

**Regarding claim 21**, as recited in claim 7, Aggrawal discloses the mobile station, wherein the determining unit is configured to determine that selective combining be performed on the received same information, by comparing part of predetermined reliability information corresponding to reception qualities of radio channels used in the plurality of cells, when the received transmission timing difference has a value within a second range (= comparing and matching of frame and synchronization times, see col. 12, lines 5-64).

**Regarding claim 22**, Aggrawal discloses a radio network controller for use in a mobile communication system for transmitting same information to a mobile station via a plurality of cells (= mobile unit/station communicates with different base station in different cell, see col. 3, lines 6-42; and combining identical frames/packet, see col. 4, lines 16-45 and col. 12, lines 55-64), comprising:

a receiving method instructing unit configured to provide an instruction on whether to perform soft combining or selective combining on the same information

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received at the mobile station, based on a transmission timing difference between the plurality of cells (= base stations inform/instruct the mobile station how to synchronize, compare and combine matching frame, see col. 8, line 60-col. 9, line 2; col. 12, lines 3-64; col. 13, line 65-col. 14, line 8; and col. 14. lines 43-57).

**Regarding claim 23**, as recited in claim 22, Aggrawal discloses the radio network controller, wherein the receiving method instructing unit is configured to provide the instruction based on the transmission timing difference between the plurality of cells and a processing capability of the mobile station (see col. 12, lines 5-64).

### **Conclusion**

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Ahmed (U.S 6,985,747)** teaches addressing techniques for use in an internet protocol-based multimedia mobile network.

**Ghosh et al., (U.S 6678523)** teaches closed loop method for reverse link soft handoff hybrid automatic repeat request.

**Yi (US 6,094,427)** teaches communications system handoff operation combining turbo coding and soft handoff techniques.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-T (9am - 7pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kwasi Karikari/  
Patent Examiner: Art Unit 2617.

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